Tooele Chemical Agent Disposal Facility Byproducts and Waste Streams

Wastes Generated by the Processing of Chemical Agent Munitions

The Tooele Chemical Agent Disposal Facility (TOCDF), similar to many industrial facilities, produces hazardous wastes as a result of processing. The wastes generated by the disposal facility are classified as hazardous waste by the state of Utah due to the association with chemical demilitarization activities. All hazardous wastes generated at TOCDF are treated and disposed of in an environmentally safe manner, in accordance with the facility's operating permits and applicable state and federal regulation. Treatment is done locally depending on the type of waste; some types of waste can be treated on site while others must be shipped off site.

TOCDF will generate the following types of waste over the course of operations from disposing of over one million munitions:

- scrubber brine;
- scrap metal;
- heated discharge conveyor ash and debris;
- incinerator slag and refractory;
- wooden dunnage; and
- miscellaneous wastes.

The wastes at TOCDF are generated and treated as follows:

Pollution Abatement System Scrubber Brine

Scrubber brine results from the treatment by the pollution abatement system of the process gases coming from the incinerators. This is the single largest waste generated at TOCDF. Spent brine is characterized as a hazardous waste. It contains water, dissolved salts, suspended solids, and trace amounts of heavy metals. The brine is transferred to storage tanks for shipment to a permitted facility for treatment and disposal. It is transported from TOCDF by licensed hazardous waste transporters in Department of Transportation-approved tanker trucks to a transfer facility, and then it is transported by rail car or truck to a facility approved under the federal Resource Conservation and Recovery Act to treat, store and dispose of hazardous wastes.

Metal Parts Furnace (MPF) Scrap Metal

MPF scrap metal is the metal munitions casings after the chemical agent has been drained; consequently, this waste is not generated by the incineration process. Drained bulk containers, projectiles and mortar rounds are treated in the MPF to destroy agent residues. After treatment in the MPF, the metal parts are allowed to cool, vacuumed to remove loose paint flakes and ash residue, and stored temporarily in roll-off bins prior to shipment off site. The metal parts are made of carbon steel; they are a listed hazardous waste in the state of Utah strictly because they formerly contained chemical agent. This scrap metal may be recycled by smelting or disposed of at a hazardous waste landfill.

Heated Discharge Conveyor Ash and Debris

The Deactivation Furnace System (DFS) processes drained rockets, mortars and mines, as well as explosive components from projectiles. This process leaves behind fiberglass ash and metal debris (aluminum and steel) from the heated discharge conveyor of the DFS. The ash and debris are collected in bins and

For more information, contact the
Tooele Chemical Stockpile Outreach Office
54 S. Main St.
Tooele, UT 84074
Phone: (435) 882-3773
Toll Free: (800) 471-1617
Fax: (435) 882-7904

or contact the
Public Affairs Office
(435) 833-4295
(435) 833-4575

or the
CMA Public Affairs Office
(800) 488-0648

Tooele Chemical Agent Disposal Facility Byproducts and Waste Streams (continued)

allowed to cool. They are subsequently sampled and analyzed to verify that they are agent free. Once this determination has been made, the wastes are consolidated into larger roll-off bins. The ash and debris are transported by licensed hazardous waste transporters to a hazardous waste landfill.

Wood Dunnage

Wood dunnage is the wood packing used to store the munitions; as a result, it is not generated by the incineration process. The wood pallets and packing materials are monitored to verify that there is no agent contamination. Once this verification occurs, the dunnage is characterized as a non-hazardous waste. The waste accumulates in roll-off bins before shipment to an approved industrial waste landfill.

Incinerator Slag and Refractory

Slag is a molten, glass-like material formed inside the liquid incinerators from burning spent decontamination solutions. Refractory is a brick-like material used to line the inside of the liquid incinerators to provide insulation from the heat. As slag accumulates and refractory gradually corrodes and is replaced, these waste materials are removed from the incinerator. Slag and refractory are listed hazardous wastes; like the MPF scrap metal, Utah also considers this material to be hazardous because it is derived from the chemical demilitarization process. These wastes typically are shipped to a hazardous waste landfill.

Maintenance, Lab and Monitoring Waste

A variety of small volume wastes are generated by maintenance, analytical and monitoring activities. These primarily consist of discarded glassware, wipe cloths, paper gloves, plastic, trash and paint waste, as well as other monitoring materials. Most of these materials have hazardous components; they are also listed hazardous wastes by the state of Utah because they are derived from the demilitarization process. These wastes are transported to a permitted facility for treatment and disposal depending on the type of waste.

Agent-Contaminated Waste

Agent-contaminated waste includes personal protective equipment, spent decontamination solution, plastic, metal and wood debris, spent carbon, maintenance debris and trash. Currently, agent contaminated waste is sealed in containers and placed in storage on site. These materials, depending on the type of waste and the level of contaminations, will be destroyed in the incinerators at TOCDF or sent to off-site treatment facilities.